What is claimed is:

1. A device that embeds an electronic watermark into an original image, comprising:

   a circuit that performs discrete cosine transform (DCT) for the original image to output DCT coefficients;

   a circuit that embeds the watermark into the DCT coefficients, the watermark containing in a part thereof an instruction to an electronic watermark detection device;

   a circuit that quantizes the DCT coefficients into which the watermark is embedded; and

   a circuit that variable-length encodes the quantized DCT coefficients.

2. The device according to claim 1 wherein the electronic watermark is eight-bit data and the instruction is four-bit data.

3. The device according to claim 1 or 2 wherein the instruction displays characters.

4. The device according to claim 1 or 2 wherein the instruction accesses a web site on the Internet.

5. The device according to claim 1 or 2 wherein the instruction starts an application program.

6. A device that detects an electronic watermark embedded in an original image, comprising:

   a circuit that decodes compressed image data in which the

4 watermark is embedded;

5   a circuit that performs inverse discrete cosine transform

6 (IDCT) for the decoded data;

7   a circuit that detects electronic watermark data embedded

8 in the data for which IDCT has been performed; and

9   a circuit that performs a predetermined processing

10 according to an instruction included in a part of the electronic

11 watermark.

1 7. The device according to claim 6 wherein the electronic

2 watermark is eight-bit data and the instruction is four-bit data.

1 8. The device according to claim 6 or 7 wherein characters are

2 displayed according to the instruction.

1 9. The device according to claim 6 or 7 wherein a web site on

2 the Internet is accessed according to the instruction.

1 10. The device according to claim 6 or 7 wherein an application

2 program is started according to the instruction.

1 11. A method for embedding an electronic watermark into an

2 original image, comprising the steps of:

3   performing discrete cosine transform (DCT) for the

4 original image to output DCT coefficients;

5   embedding the watermark into the DCT coefficients, the

6 watermark containing in a part thereof an instruction to an

7 electronic watermark detection device;

8   quantizing the DCT coefficients into which the watermark

9 is embedded; and

10   variable-length encoding the quantized DCT coefficients.

1 12. The method for inserting a watermark according to claim

2 11 wherein the electronic watermark is eight-bit data and the

3 instruction is four-bit data.

1 13. The method according to claim 11 or 12 wherein the

2 instruction displays characters

1 14. The method according to claim 11 or 12 wherein the

2 instruction accesses a web site on the Internet.

1 15. The method according to claim 11 or 12 wherein the

2 instruction starts an application program.

1 16. A method for detecting an electronic watermark embedded

2 in an original image, comprising the steps of:

3   decoding compressed image data in which the watermark is

4 embedded;

5   performing inverse discrete cosine transform (IDCT) for

6 the decoded data;

7   detecting electronic watermark data embedded in the data

8 for which IDCT has been performed; and

9   performing a predetermined processing according to an

10 instruction included in a part of the electronic watermark.

1 17. The method according to claim 16 wherein the electronic

2 watermark is eight-bit data and the instruction is four-bit data.

1 18. The method according to claim 16 or 17 wherein characters

2 are displayed according to the instruction.

1 19. The method according to claim 16 or 17 wherein a web site

2 on the Internet is accessed according to the instruction.

1 20. The method according to claim 16 or 17 wherein an application

2 program is started according to the instruction.

1 21. A computer readable recording medium storing therein a

2 program for embedding an electronic watermark into an original

3 image, said program causing a computer to:

4   perform discrete cosine transform (DCT) for the original

5 image to output DCT coefficients;

6   embed the watermark into the DCT coefficients, the

7 watermark containing in a part thereof an instruction to an

8 electronic watermark detection device;

9   quantize the DCT coefficients into which the watermark

10 is embedded; and

11   variable-length encode the quantized DCT coefficients.

1 22. A computer-readable recording medium storing therein a

2 program for detecting an electronic watermark embedded in an

3 original image, said program causing a computer to:

4   decode compressed image data in which the watermark is

5   embedded;

6   perform inverse discrete cosine transform (IDCT) for the

7   decoded data;

8   detect electronic watermark data embedded in the data for

9   which IDCT has been performed; and

10   perform a predetermined processing according to an

11 instruction included in a part of the electronic watermark.